

Day : Wednesday

Date: 12/4/2002

Time: 09:10:18

 **PALM INTRANET**

Continuity Information for 60/101077

Parent Data

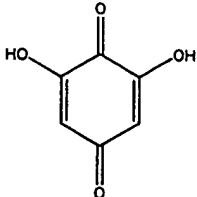
No Parent Data

Child Data09204232 Claims Priority from Provisional Application 6010107709204237 Claims Priority from Provisional Application 60087788PCT/US98/25573 Claims Priority from Provisional Application 60087788PCT/US98/25577 is a continuation of 09159105[Appln Info](#)[Contents](#)[Petition Info](#)[Atty/Agent Info](#)[Continuity
Data](#)[Foreign Data](#)[Invent](#)Search Another: Application# or Patent# PCT / / or PG PUBS # Attorney Docket #

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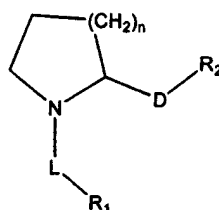
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No.	n	D	R ₂	R ₁
812	1	bond		benzyl
813	1	bond	CH ₂ OH	benzyl
814	1	bond	CONH ₂	benzyl
815	1	bond	CN	benzyl

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TABLE LI



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No.	n	D	R ₂	L	R ₁
816	1	CH ₂	OH	1,2-dioxoethyl	benzyl
817	1	bond	-CN	1,2-dioxoethyl	1,1-dimethylpropyl
818	1	bond	tetrazole	1,2-dioxoethyl	1,1-dimethylpropyl
819	2	bond	CONH ₂	1,2-dioxoethyl	1,1-dimethylpropyl
820	1	bond	COOH	1,2-dioxoethyl	1,1-dimethylpropyl
821	2	bond	COOH	1,2-dioxoethyl	1,1-dimethylpropyl

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Synthesis of Compounds of the Invention

The compounds for use in the methods and compositions of the invention may be readily prepared by standard techniques of organic chemistry, utilizing the general synthetic pathways depicted below.

In the preparation of the compounds of the invention, one skilled in the art will understand that one may need to protect or block various reactive functionalities on the starting compounds or intermediates while a desired reaction is carried out on other portions of the molecule.

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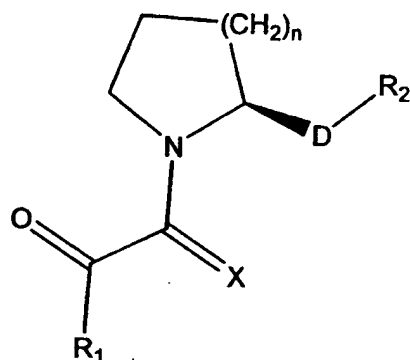


Table XLI

when D is a bond and R2 is COOH,

No.	X	n	R ₁
285	O	1	3,4,5-trimethylphenyl
286	O	2	3,4,5-trimethylphenyl
287	O	1	tert-butyl
287	O	3	tert-butyl
288	O	1	cyclopentyl
289	O	2	cyclopentyl
290	O	3	cyclopentyl
291	O	1	cyclohexyl
292	O	2	cyclohexyl
293	O	3	cyclohexyl
294	O	1	cycloheptyl
295	O	2	cycloheptyl
296	O	3	cycloheptyl
297	O	1	2-thienyl
298	O	2	2-thienyl
299	O	3	2-thienyl
300	O	1	2-furyl
301	O	2	2-furyl
302	O	3	2-furyl
303	O	3	phenyl
304	O	1	1,1-dimethylpentyl
305	O	2	1,1-dimethylhexyl
306	O	3	ethyl
307			

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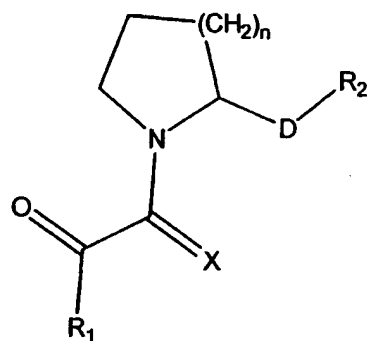
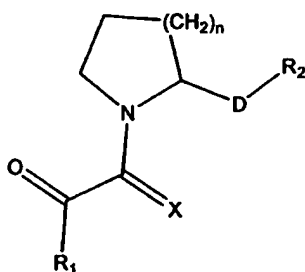


TABLE XLII

	No.	X	n	R ₁	D	R ₂
10	308	S	1	1,1-dimethyl propyl	CH ₂	COOH
	309	S	1	1,1-dimethyl propyl	bond	COOH
	310	O	1	1,1-dimethyl propyl	CH ₂	OH
	311	O	1	1,1-dimethyl propyl	bond	SO ₃ H
15	312	O	1	1,1-dimethyl propyl	CH ₂	CN
	313	O	1	1,1-dimethyl propyl	bond	CN
	314	O	1	1,1-dimethyl propyl	bond	tetrazolyl
	315	S	1	phenyl	(CH ₂) ₂	COOH
	316	S	1	phenyl	(CH ₂) ₃	COOH
20	317	S	2	phenyl	CH ₂	COOH
	318	O	1	1,1-dimethyl propyl	bond	CONH ₂
	319	O	2	1,1-dimethyl propyl	bond	CONH ₂
	320	S	2	2-furyl	bond	PO ₃ H ₂
	321	O	2	propyl	(CH ₂) ₂	COOH
25	322	O	1	propyl	(CH ₂) ₃	COOH
	323	O	1	tert-butyl	(CH ₂) ₄	COOH
	324	O	1	methyl	(CH ₂) ₅	COOH
	325	O	2	phenyl	(CH ₂) ₆	COOH
	326	O	2	3,4,5- trimethoxy- phenyl	CH ₂	COOH
30	327	O	2	3,4,5- trimethoxy- phenyl	CH ₂	tetrazolyl

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TABLE XLIII



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
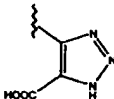
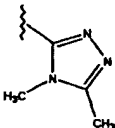
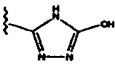
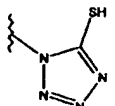
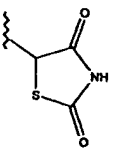
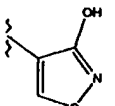
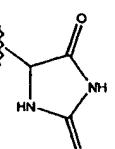
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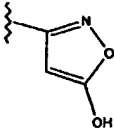
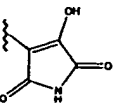
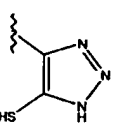
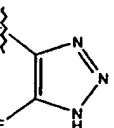
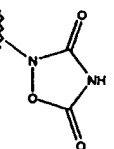
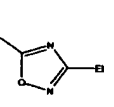
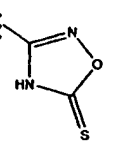
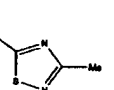
No.	n	X	D	R ₂	R ₁
328	1	S	bond	COOH	Phenyl
329	1	O	bond	COOH	a-MethylBenzyl
330	2	O	bond	COOH	4-MethylBenzyl
331	1	O	bond	Tetrazole	Benzyl
332	1	O	bond	SO ₃ H	a-MethylBenzyl
333	1	O	CH ₂	COOH	4-MethylBenzyl
334	1	O	bond	SO ₂ HNMe	Benzyl
335	1	O	bond	CN	a-MethylBenzyl
336	1	O	bond	PO ₃ H ₂	4-MethylBenzyl
337	2	O	bond	COOH	Benzyl
338	2	O	bond	COOH	a-MethylBenzyl
339	2	O	bond	COOH	4-MethylBenzyl
340	2	S	bond	COOH	3,4,5-trimethoxyphenyl
341	2	O	bond	COOH	Cyclohexyl
342	2	O	bond	PO ₂ HEt	i-propyl
343	2	O	bond	PO ₃ HPropyl	ethyl
344	2	O	bond	PO ₃ (Et) ₂	Methyl
345	2	O	bond	OMe	tert-butyl
346	1	O	bond	OEt	n-pentyl
347	2	O	bond	OPropyl	n-hexyl
348	1	O	bond	OButyl	Cyclohexyl
349	1	O	bond	OPentyl	cyclopentyl
350	1	O	bond	OHexyl	n-heptyl
351	1	O	bond	SMe	n-octyl
352	1	O	bond	SEt	n-nonyl
353	2	O	bond	SPropyl	2-indolyl
354	2	O	bond	SButyl	2-furyl
355	2	O	bond	NHCOMe	2-thiazolyl
356	2	O	bond	NHCOEt	2-thienyl
357	1	O	CH ₂	N(Me) ₂	2-pyridyl
358	1	O	(CH ₂) ₂	N(Me)Et	1,1-dimethylpropyl
359	1	O	(CH ₂) ₃	CON(Me) ₂	1,1-dimethylpropyl
360	1	O	(CH ₂) ₄	CONHMe	1,1-dimethylpropyl

5	361	1	O	(CH ₂) ₅	CONHEt	1,1-dimethylpropyl
	362	1	O	(CH ₂) ₆	CONHPropyl	1,1-dimethylpropyl
	363	1	O	bond	CONH(O)Me	Benzyl
	364	1	O	bond	CONH(O)Et	a-Methylphenyl
	365	1	O	bond	CONH(O)Propyl	4-Methylphenyl
10	366	1	O	(CH ₂) ₂	COOH	Benzyl
	367	1	O	bond	COOH	a-Methylphenyl
	368	1	O	bond	COOH	4-Methylphenyl
	369	1	O	CH ₂	COOH	1,1-dimethylpropyl
	370	1	O	(CH ₂) ₂	COOH	1,1-dimethylbutyl
15	371	1	O	(CH ₂) ₃	COOH	1,1-dimethylpentyl
	372	1	O	(CH ₂) ₄	COOH	1,1-dimethylhexyl
	373	1	O	(CH ₂) ₅	COOH	1,1-dimethylethyl
	374	1	O	(CH ₂) ₆	COOH	iso-propyl
	375	1	O	(CH ₂) ₇	COOH	tert-butyl
20	376	1	O	(CH ₂) ₈	COOH	1,1-dimethylpropyl
	377	1	O	(CH ₂) ₉	COOH	benzyl
	378	1	O	(CH ₂) ₁₀	COOH	1,1-dimethylpropyl
	379	1	O	C ₂ H ₂	COOH	cyclohexylmethyl
	380	1	O	2-OH, Et	COOH	1,1-dimethylpropyl
25	381	1	O	2-butylene	COOH	1,1-dimethylpropyl
	382	1	S	<i>i</i> -Pro	COOH	1,1-dimethylpropyl
	383	2	S	<i>t</i> -Bu	COOH	phenyl
	384	2	O	2-NO ₂ -hexyl	COOH	1,1-dimethylpropyl
	385	1	O	(CH ₂) ₂	CN	1,1-dimethylpropyl
30	386	1	O	(CH ₂) ₃	CN	1,1-dimethylpropyl
	387	3	O	bond	CONHNHSO ₂ Me	Benzyl
	388	3	O	bond	CONHNHSO ₂ Et	a-Methylphenyl
	389	3	O	bond	CONHSO ₂ Me	4-Methylphenyl
	390	1	O	bond	CONHNHSO ₂ Et	Phenyl
35	391	2	O	bond	CON(Me)CN	a-Methylphenyl
	392	1	O	bond	CON(Et)CN	4-Methylphenyl
	393	1	O	(CH ₂) ₂	COOH	methyl
	394	1	O	(CH ₂) ₃	COOH	ethyl
	395	1	O	(CH ₂) ₄	COOH	n-propyl
40	396	1	O	(CH ₂) ₅	COOH	t-butyl
	397	1	O	(CH ₂) ₆	COOH	Pentyl
	398	1	O	(CH ₂) ₇	COOH	Hexyl
	399	1	O	(CH ₂) ₈	COOH	Heptyl
	400	1	O	(CH ₂) ₉	COOH	Octyl
	401	1	O	C ₂ H ₂	COOH	Cyclohexyl

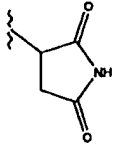
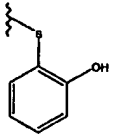
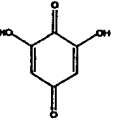
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No.	n	X	D	R ₂	R ₁	
402	2	O	bond		1,1-dimethylpropyl	
403	1	O	bond		1,1-dimethylpropyl	
404	1	O	bond		1,1-dimethylpropyl	
5	405	1	O	bond		1,1-dimethylpropyl
406	1	O	bond		1,1-dimethylpropyl	
407	1	O	bond		1,1-dimethylpropyl	
408	1	O	bond		1,1-dimethylpropyl	
409	1	O	bond		1,1-dimethylpropyl	

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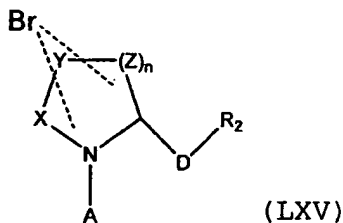
No.	n	X	D	R ₂	R ₁
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411	1	O	bond		1,1-dimethylpropyl
412	1	O	bond		1,1-dimethylpropyl
413	1	O	bond		1,1-dimethylpropyl
414	1	O	bond		1,1-dimethylpropyl
415	1	O	bond		1,1-dimethylpropyl
416	1	O	bond		1,1-dimethylpropyl
417	1	O	bond		1,1-dimethylpropyl

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No.	n	X	D	R ₂	R ₁
418	1	O	bond		1,1-dimethylpropyl
419	1	O	bond		1,1-dimethylpropyl
420	1	O	bond		1,1-dimethylpropyl
421	1	O	bond	COOH	1,1-dimethylpropyl
422	2	O	bond	COOH	1,1-dimethylpropyl

FORMULA LXV

Another preferred embodiment of this aspect of the invention is a compound of the formula LXV:



in which

X, Y, and Z are independently selected from the group consisting of C, O, S, or N, provided that X, Y, and Z are not all C;

n is 1-3;

the primary ring structure optionally includes Br, wherein Br is a heterocyclic bridged ring moiety, wherein

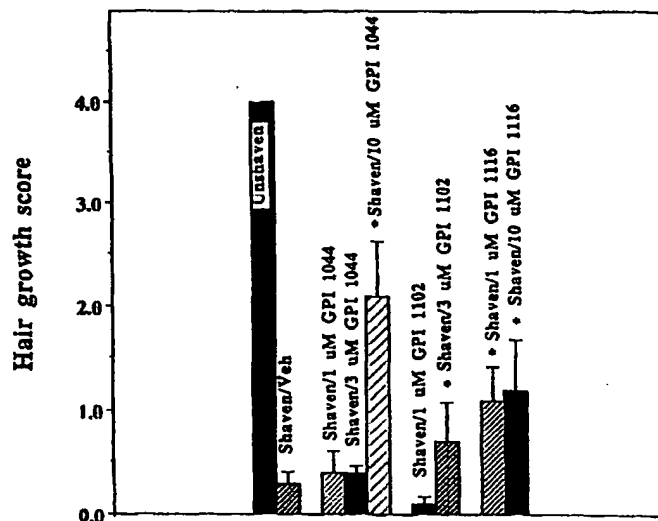


INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification : Not classified		A2	(11) International Publication Number: WO 00/16603
			(43) International Publication Date: 30 March 2000 (30.03.00)
(21) International Application Number: PCT/US98/25577 (22) International Filing Date: 3 December 1998 (03.12.98) (30) Priority Data: 60/101,077 18 September 1998 (18.09.98) US 09/159,105 23 September 1998 (23.09.98) US (71) Applicants: GUILFORD PHARMACEUTICALS INC. [US/US]; 6611 Tributary Street, Baltimore, MD 21224 (US). AMGEN, INC. [US/US]; Patent Operations M/S 27-4-A, One Amgen Center Drive, Thousand Oaks, CA 91320-1789 (US). (72) Inventors: LI, Jia-He; 27 Warren Manor Court, Cockeysville, MD 21044 (US). LIMBURG, David; 3619 Double Rock, Baltimore, MD 21234 (US). HAMILTON, Gregory, S.; 6501 Frederick Road, Catonsville, MD 21228 (US). STEINER, Joseph, P.; 988 Sugar Maple Street, Hampstead, MD 21074 (US). (74) Agent: NATH, Gary, M.; Nath & Associates, 6th floor, 1030 15th Street, N.W., Washington, DC 20005 (US).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published With declaration under Article 17(2)(a); without classification and without abstract; title not checked by the International Searching Authority.	

(54) Title: BRIDGED HETEROCYCLIC DERIVATIVES

Promotion of Hair Growth by GPI Neuroimmunophilin ligands



1.0 = 25% hair regrowth
 2.0 = 50% hair regrowth
 3.0 = 75% hair regrowth
 4.0 = 100% hair regrowth

Day : Wednesday

Date: 12/4/2002

Time: 08:38:49

 **PALM INTRANET**

Continuity Information for 60/101077

Parent Data

No Parent Data

Child Data09204232 Claims Priority from Provisional Application 6010107709204237 Claims Priority from Provisional Application 60087788PCT/US98/25573 Claims Priority from Provisional Application 60087788PCT/US98/25577 is a continuation of 09159105[Appln Info](#)[Contents](#)[Petition Info](#)[Atty/Agent Info](#)[Continuity
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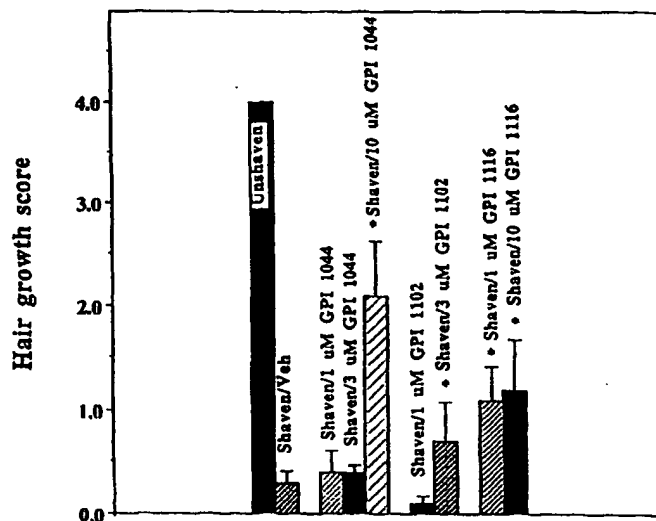


INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification : N t classified		A2	(11) International Publication Number: WO 00/16603
			(43) International Publication Date: 30 March 2000 (30.03.00)
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